

ABSTRACT

An optical module 1 comprises an inlet side optical fiber, an optical filter optically connected to the inlet side optical fiber, and an outlet side optical fiber optically connected to the optical filter, wherein, the optical filter comprises a gain-slope compensation optical filter to flatten a gain slope ($dG/d\lambda$, where G:gain, λ :wavelength) of a gain of an optical amplifier connected to the inlet side optical fiber or the outlet side optical fiber. An optical amplifying module comprises an optical amplifier with the above-mentioned optical module 1. An optical transmission system comprises the optical module 1, an optical amplifier and an optical branching means, wherein FDM (Frequency Division Multiplexing) signal is branched and transmitted.